

REMARKS

The Office Action dated January 26, 2005 presents the examination of claims 25-27 and 29-33. Claim 30 is canceled. Claims 25, 26, and 31-33 are amended to delete subject matter and/or clarify the claim language used therein. No new subject matter has been added to the claims, nor has any new matter been inserted into the application.

*Rejection under 35 U.S.C. § 112, first paragraph*

The Examiner rejects claims 32 and 33 for allegedly containing subject matter not described in the specification. Applicants respectfully traverse. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

Specifically, the Examiner asserts that the specification does not support a DNA comprising the reverse complement of SEQ ID NO: 5. Applicants respectfully disagree. SEQ ID NO: 5 corresponds to antisense primer "3", as shown in Figures 1 and 3. The primer pair "5" and "3" amplify fragment C of the essential region coding for SEQ ID NO: 2, as shown in Figure 1. Thus, the reverse complement of SEQ ID NO: 5 is found in fragment C of SEQ ID NO: 2, and accordingly fully supported by the specification.

Applicants respectfully submit that the pending claims fully comply with 35 U.S.C. § 112, first paragraph. Withdrawal of the instant rejection is therefore respectfully requested.

***Rejection under 35 U.S.C. § 112, second paragraph***

The Examiner rejects claims 25-27 and 29-33 under 35 U.S.C. § 112, second paragraph for allegedly being indefinite. Claim 30 is canceled, thus rendering rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

**Claim 25**

The Examiner argues that claim 25 is unclear as to which "enzymological properties" of the claimed protein remain unchanged. The recitation of "without changing enzymological properties of a protein having the amino acid sequence described in SEQ ID NO:2" is deleted from claim 25. Applicants note that the mutated SEQ ID NO: 2 protein may have properties (other than hydrolyzing 1,4- $\alpha$ -glucosidic linkages) that vary from the wild-type.

The Examiner also asserts that the term "modified" protein encompasses both mutated and chemically modified proteins. In order to overcome this rejection, but not to acquiesce to the Examiner's

position, the claims are amended to recite "mutant" protein, as suggested by the Examiner. Thus, the instant rejection is overcome.

Claims 31-33

The Examiner states that specific properties of the mutant alkaline liquefying  $\alpha$ -amylase do not need to be repeated in dependent claims 31-33. In response to the Examiner's remarks, the phrase "which encodes a protein exhibiting alkaline liquefying  $\alpha$ -amylase activity at a pH optimum of 8-9" is deleted from claims 31, 32, and 33, since claim 25 already recites this limitation.

Applicants respectfully submit that the pending claims fully comply with 35 U.S.C. § 112, second paragraph. Withdrawal of the instant rejection is therefore respectfully requested.

**Conclusion**

Applicants respectfully submit that the above remarks and/or amendments fully address and overcome the outstanding rejections. For the foregoing reasons, Applicants respectfully request the Examiner to withdraw all of the outstanding rejections and objections, and to issue a Notice of Allowance indicating the patentability of the present claims. Early and favorable action of the merits of the present application is thereby respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number of the below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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